

Work Order ID 158757

Thursday, March 30, 2017 3:56:05 PM

158757

Page 1

Item ID: 647.7910

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Angle Bracket

Start Date: 3/31/2017 Start Qty: 8.00

8

Cust Item ID:

Required Date: 4/18/2017 Req'd Qty: 8.00

8

Customer:

Reference: SCHEDULED/C

Approvals:

Process Plan:

DAS
21
8-89

Date: MAR 31 2017

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
647.7900	N/C

110

0.00

110

Waterjet

FLOW CNC Waterjet

Memo

1-Cut as per Dwg

Dwg Rev: NICProg Rev: NIC

2-Deburr if necessary

0.39

8DAS
46
8-8917/04/03

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Quality Control

Memo

0.00

8DAS
46
8-8917/04/03

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

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158757

Page 2

Item ID: 647.7910 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Angle Bracket
Start Date: 3/31/2017 Start Qty: 8.00 ***8*** Cust Item ID:
Required Date: 4/18/2017 Req'd Qty: 8.00 ***8*** Customer:
Reference: SCHEDULED/C

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				<u>8</u>			DAS 38 9-89 APR 04 2017
140 *140* Brake NC Brake NC	Form as per dwg Memo	0.08 0.27			DAS 30 9-89	<u>8</u>			APR 06 2017
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				<u>8</u>			DAS 38 9-89 APR 06 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified ☐	☐	Past Due	☐				

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																							
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Root Cause				FAULT CATEGORY																																																											
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	☐ No Re-verification	☐ Operator	☐ Offset/Setup	☐ Supplier	☐ Training	☐ Use for Testing	☐ Poor Information	☐ Rushing	☐ Product Improvement	☐ Process Improvement	☐ Manufacturing Process	☐ Past Due	☐ Pressure/Forced	☐ Bending	☐ Centre Not Concentric	☐ Cracks	☐ Crimp/Kink/Ripple/Wave	☐ Cuffs	☐ Crushing	☐ Heat Treat	☐ Wave/Twist in Tube	☐ Marks/Chatter	☐ Temperature/Cure	☐ Set-up	☐ BOM/Route	☐ Broken/Damage/Defect	☐ Inspection Incomplete/Unqualified	☐ Contamination	☐ Countersink	☐ Cut Too Short	☐ Instructions Incomplete/Unclear	☐ Drill Holes	☐ Power Loss/Surge	☐ Folio/Program	☐ Grain	☐ Weld	☐ Wrong Stock Pulled	☐ Out of Sequence	☐ Off-set	☐ Mislabeled	☐ Fit/Function	☐ Misaligned/off center	☐ Positioned Wrong	☐ Outside Dimensions	☐ Over/Under tolerance	☐ Part Incorrect	☐ Part Lost/Missing	☐ Part Moved	☐ Drawing	☐ Finish	☐ Misread	☐ Turning Sequence
OTHER :																																																															

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : ☐							

Work Order ID 158757

Thursday, March 30, 2017 3:56:05 PM

158757

Page 5

Item ID: 647.7910 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Angle Bracket
Start Date: 3/31/2017 Start Qty: 8.00 ***g*** Cust Item ID:
Required Date: 4/18/2017 Req'd Qty: 8.00 ***g*** Customer:
Reference: SCHEDULED/C

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	Memo	0.00							
Quality Control									

17/6/7 70

 JUN 02 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

Picklist Print

Thursday, March 30, 2017 3:56:05 PM

Page 1

Work Order ID: 158757

158757

Parent Item: 647.7910

647 7910

Parent Item Name: Angle Bracket

Start Date: 3/31/2017

Required Date: 4/18/2017

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 12.10.03 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.063		Purchased	No			110	sf	44.9500	0.084	0.707369	DAS 46 9-89		
M2024T3S 063									**			17/04/03	
2024-T3 .063 sheet													

Location

Loc Qty

Loc Code

MAT

6.6

m135512

6.6

MAT009

38.35

m134640

26.4

m135612

11

n136492

0.95

0.8

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause			FAULT CATEGORY		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐				

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION- PNT		N/C
N/C	INITIAL RELEASE	11-25-97	P. BLAVO

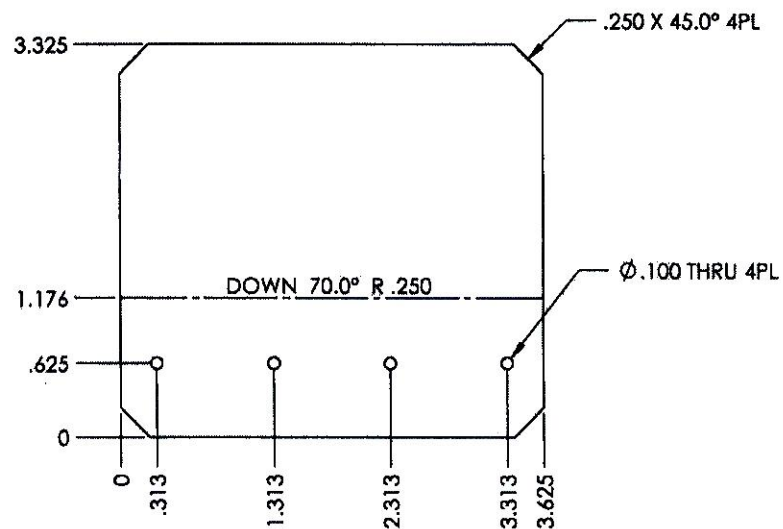
NOTES:

- 1 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4
- 2 FINISH: ANODIZE PER MIL STD-A-8625, TYPE III, CLASS 2, COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377J TYPE I CLASS N
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120

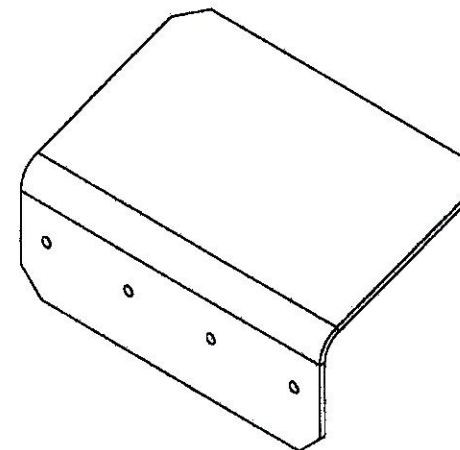
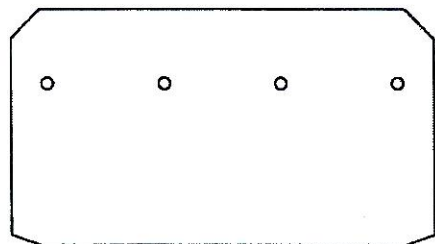
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 158757 MCL
17-03-31

	647.7919	SHIM	△	△
	647.7918	BRACKET	△	△
	647.7917	BRACKET	△	△
	647.7916	BRACKET	△	△
	647.7915	BRACKET	△	△
	647.7914	BRACKET	△	△
	647.7913	DOUBLER	△	△
	647.7912	CLIP	△	△
	647.7911	BRACKET	△	△
	647.7910	ANGLE BRACKET	△	△
F/N	PART #	DESCRIPTION	MATL	SPEC
QTY	PARTS LIST			
NEXT ASSY (S)	APICAL INDUSTRIES			
647.7300	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300			
	SHEET METAL			
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 7 PLACE DECIMALS ± .01 2 PLACE DECIMALS ± .005 ANGLES ± .5°			
	REV. CODE	DWG. NO.	647.7900	REV. N/C
	B	07M26		
	SCALE	NONE	SHEET	1 OF 9

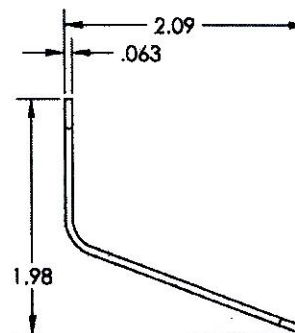
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FLAT PATTERN



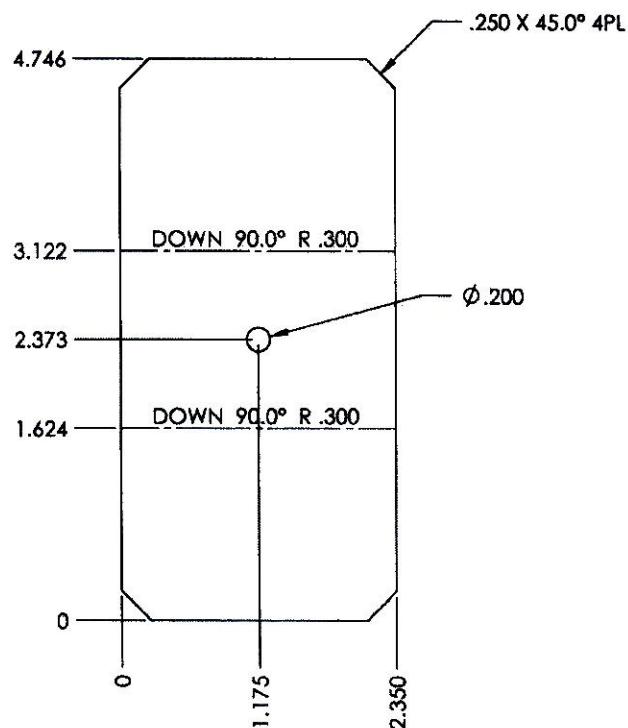
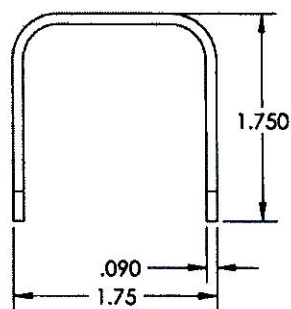
647.7910



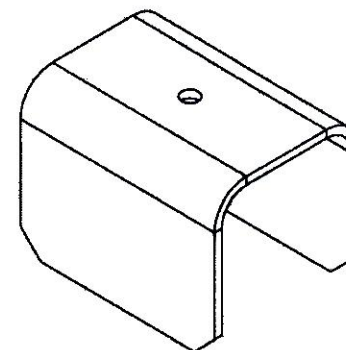
ORIGINAL DATE 11-28-89		APICAL INDUSTRIES	
DRAWN BY E. ANDERSON P. BRAVO		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO		SHEET METAL	
CONTRACT NO.			
MATERIALS SPECIFIED SHEET METAL FINISHES ARE: 2 PLACES DECIMAL 1.01 2 PLACES DECIMAL 1.08 ANDERSON & P.		801 CASE CODE 8 07M26	REV. NYC
		DWG NO. 647.7900	SHEET 2 OF 9
		SCALE: NONE	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



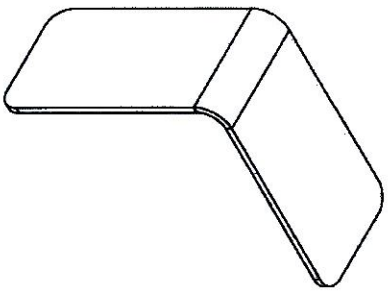
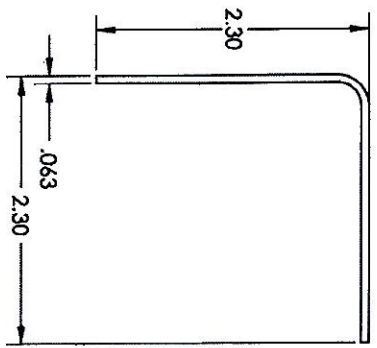
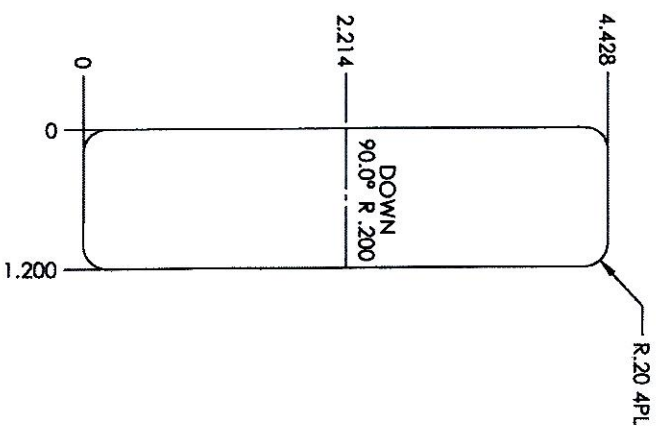
FLAT PATTERN



647.7911

ORIGINAL DATE MODIFIED DESIGNED DRAWING APPROVAL P. BRAVO CORRECTIONS:		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS .01 ANGLES ± 3°		SHEET METAL	
SIZE B	CASE CODE 07M26	DWG. NO. 647.7900	REV. N/C
SCALE NONE		SHEET 3 OF 9	

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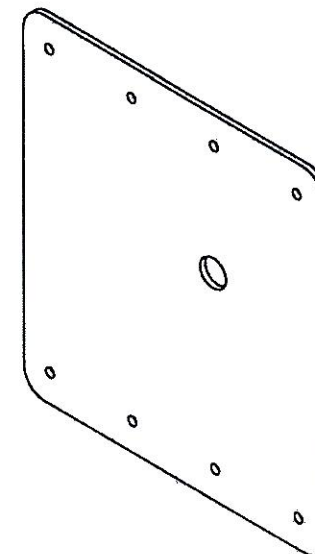
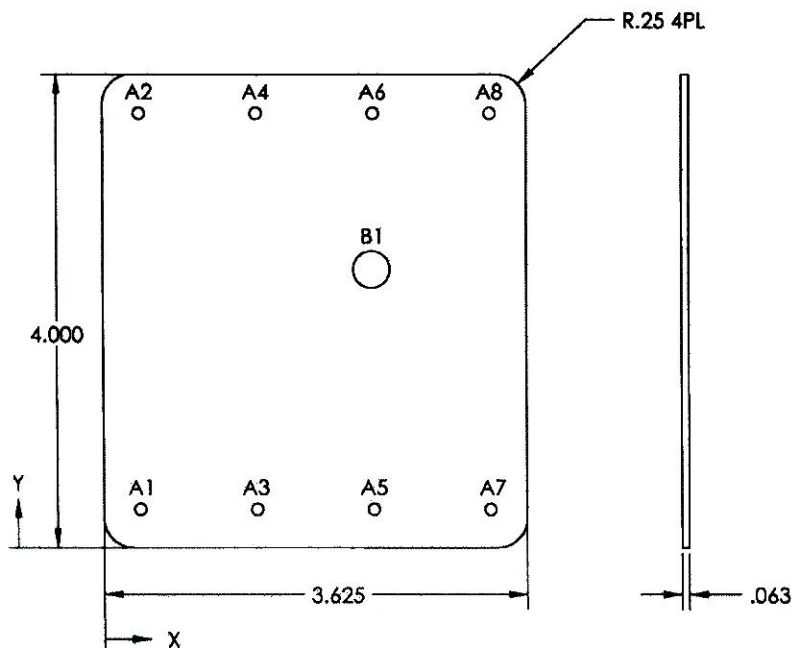
647.7912

REV.	DESCRIPTION	DATE	APPROVED

APICAL INDUSTRIES 2409 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92066-5512 (760) 724-5300	
SHEET METAL	
822 07M16 8 07M16 647.7900	822 07M16 8 07M16 647.7900
SCALE: NONE	
SHEET 4 OF 9	

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



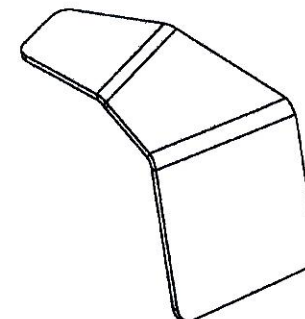
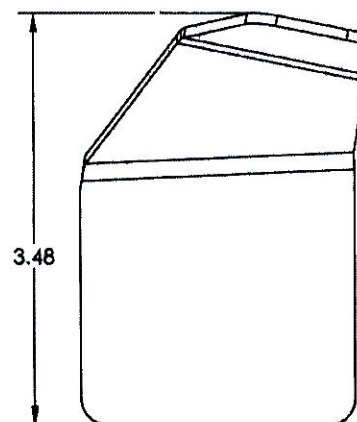
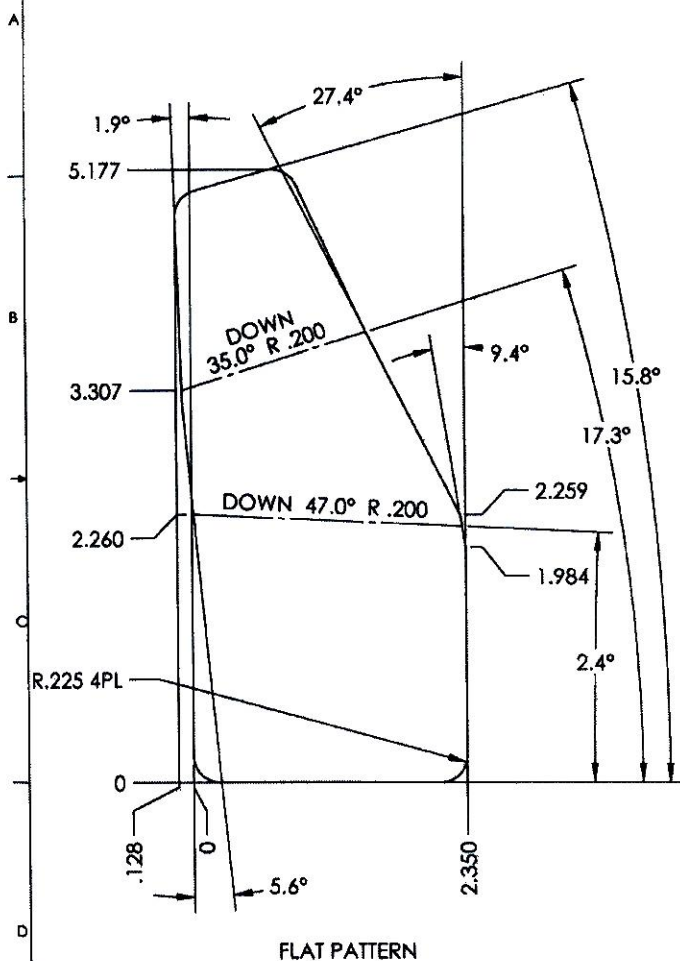
647.7913

TAG	X LOC	Y LOC	SIZE
A1	.313±.002	.325±.002	Ø.100
A2	.313±.002	3.675±.002	Ø.100
A3	1.313±.002	.325±.002	Ø.100
A4	1.313±.002	3.675±.002	Ø.100
A5	2.313±.002	.325±.002	Ø.100
A6	2.313±.002	3.675±.002	Ø.100
A7	3.313±.002	.325±.002	Ø.100
A8	3.313±.002	3.675±.002	Ø.100
B1	2.300±.002	2.350±.002	Ø.313

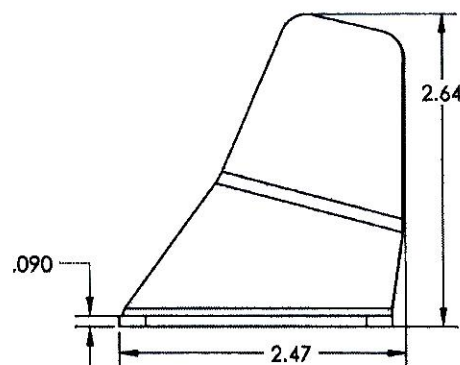
ORIGINAL DATE 2/20/2011 11:23:49	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300			
DRAWN BY E. ANDERSON P. BRAVO				
DRAWING APPROVAL P. BRAVO	SHEET METAL			
CONTINGENT No.				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°	SIZE B	CAGE CODE 07MA26	DWG. NO. 647.7900	REV N/C
	SCALE NONE			SHEET 5 OF 9

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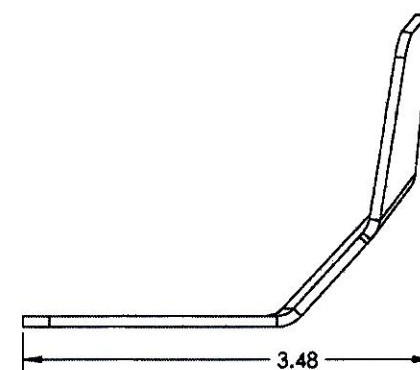
REV.	DESCRIPTION	DATE	APPROVED



647.7914
647.7915 OPPOSITE



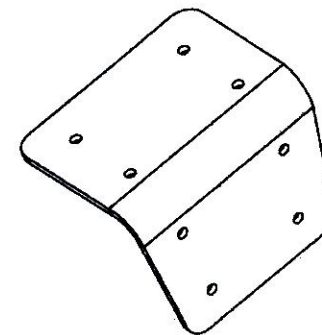
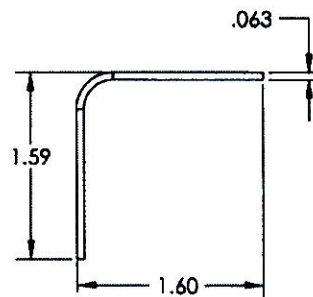
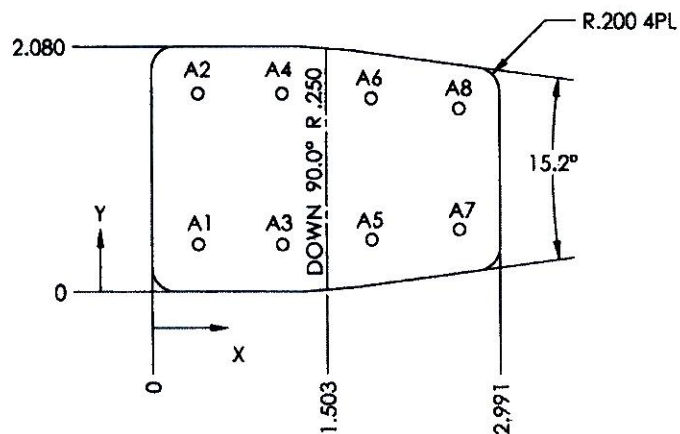
647.7914 SHOWN
647.7915 OPPOSITE



ORIGINAL DATE 11-22-97	APICAL INDUSTRIES		
DRAWN BY E. ANDERSON	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		
CHECKED BY P. BRAVO	SHEET METAL		
DRAWING APPROVAL P. BRAVO	SCALE NONE		
CONTRACT NO.	SHEET 6 OF 9		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES	SZL B	CAGE CODE 07M26	ENG. NO. 647.7900
			REV N/C

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REV.	DESCRIPTION	DATE	APPROVED



647.7916

FLAT PATTERN

TAG	X LOC	Y LOC	SIZE
A1	.400±.002	.400±.002	Ø.100 THRU
A2	.400±.002	1.680±.002	Ø.100 THRU
A3	1.125±.002	.400±.002	Ø.100 THRU
A4	1.125±.002	1.680±.002	Ø.100 THRU
A5	1.891±.002	.440±.002	Ø.100 THRU
A6	1.891±.002	1.640±.002	Ø.100 THRU
A7	2.646±.002	.528±.002	Ø.100 THRU
A8	2.646±.002	1.553±.002	Ø.100 THRU

ORIGINAL DATE
10/20/18 11:30 AM
DRAWN BY
J. ANDERSON P. BRAVO
DRAWING APPROVAL
P. BRAVO
10/20/18
CONTRACT NO.

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760) 724-5300

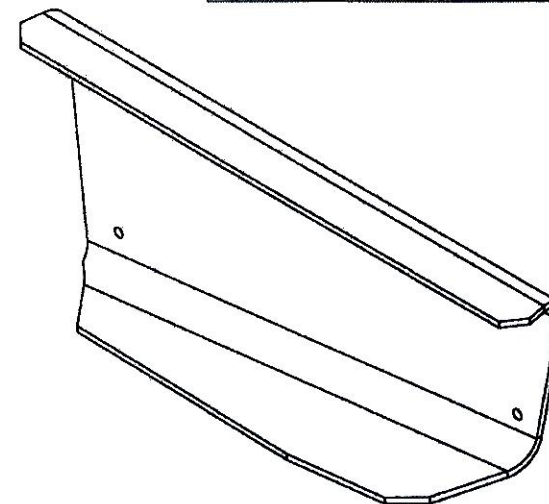
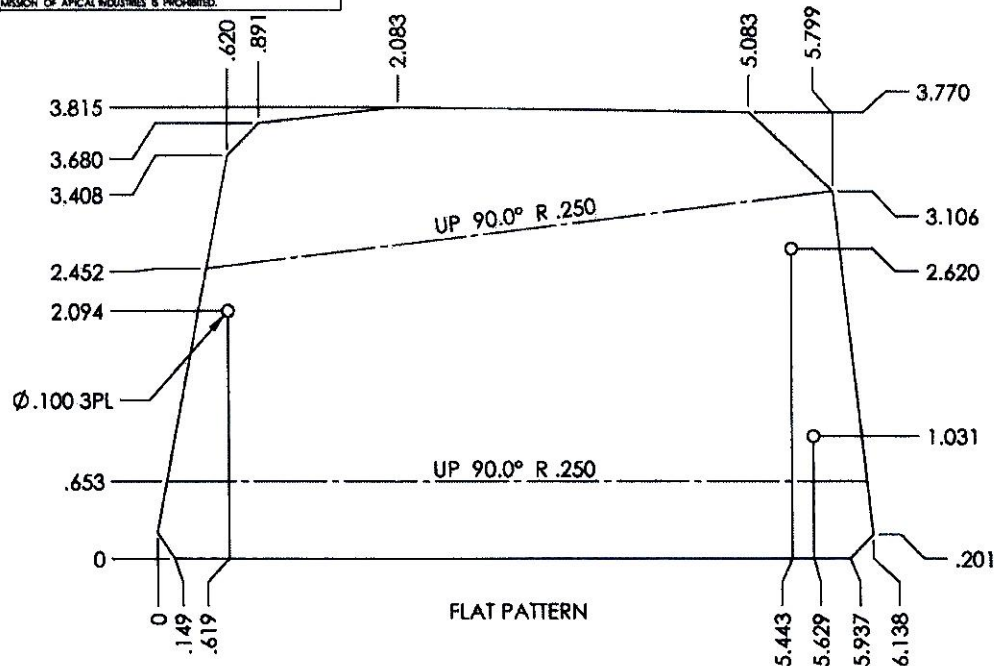
SHEET METAL

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
3 PLACE DECIMALS ±.01
2 PLACE DECIMALS ±.005
ANGLES ±.5°

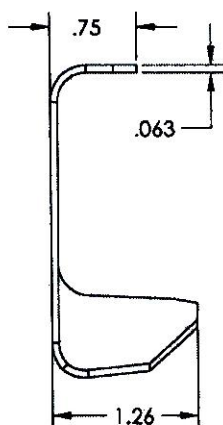
SIZE 8 CAGE CODE 07M16 DWG. NO. 647.7900 REV. N/C
SCALE NONE SHEET 7 OF 9

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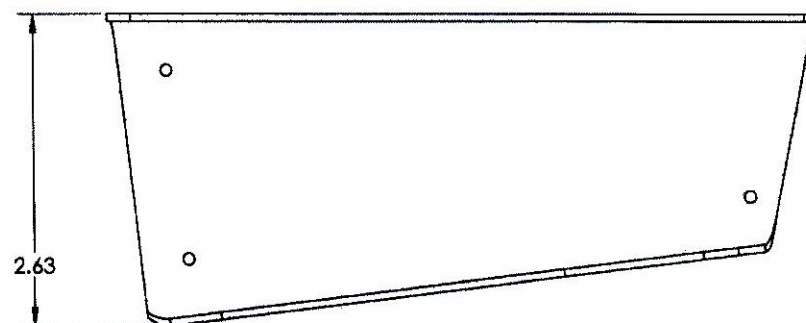
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



647.7917
647.7918 OPPOSITE



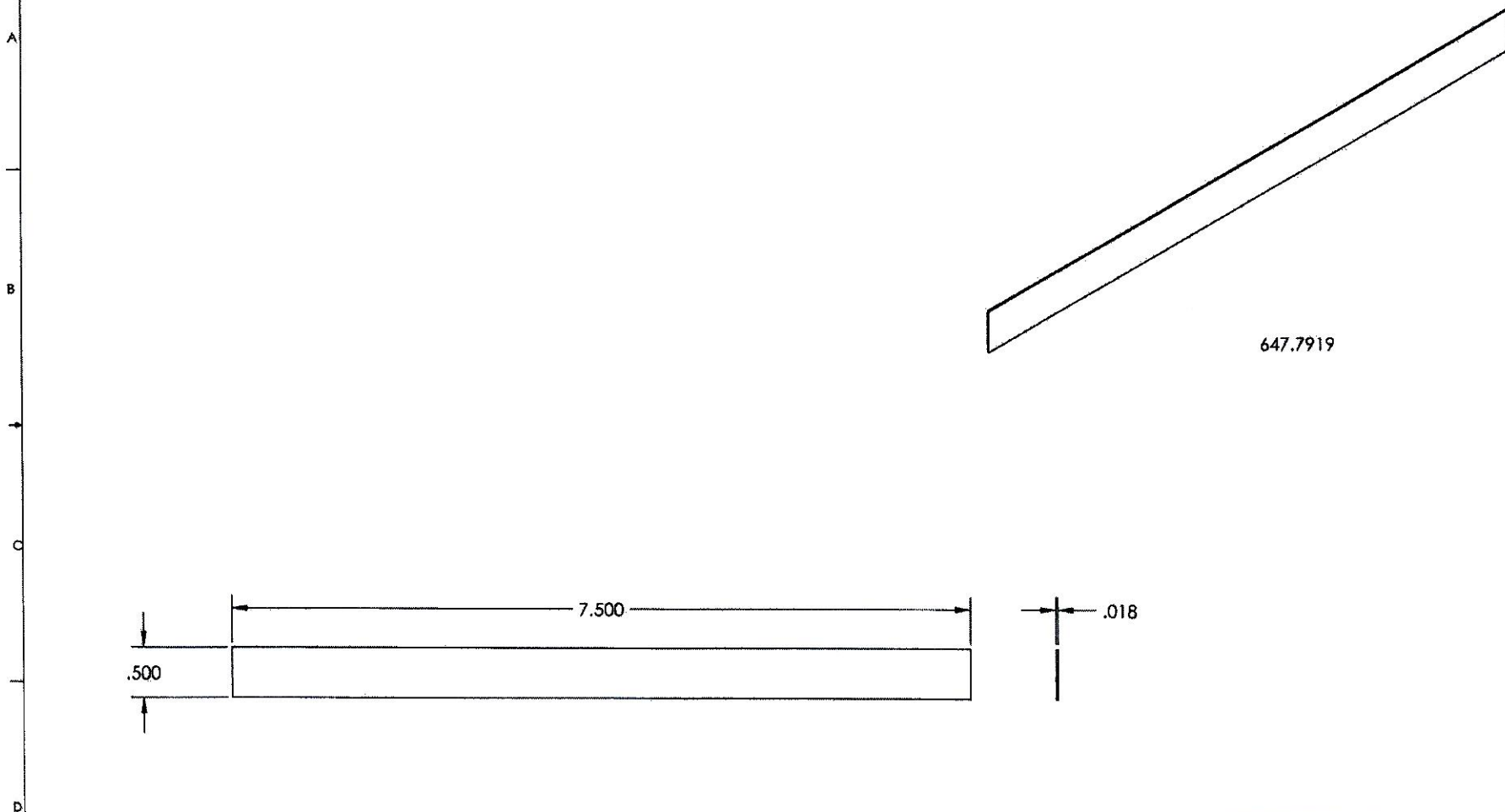
647.7917 SHOWN
647.7918 OPPOSITE



ORIGINAL DATE 11-28-89 DRAWN BY E. ANDERSSON CHECKED J. L. BROWN DRAWING APPROVAL P. BRAVO 11/28/89 CONTACT NO.	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300		
SHEET METAL			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE .001 3 PLACES DECIMALS .001 ANGLES .5°	SEE CAGE CODE B 07M16 SCALE NONE	DWG NO. 647.7900 SHEET 8 OF 9	REV. N/C

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



ORIGINAL DATE 11-22-09		DRAWN BY E. RECTOR	
CHECKED BY L. ANDERSON		P. MAYO	
DRAWING APPROVAL P. MAYO		CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		TOLERANCES ARE:	
3 PLACE DECIMALS .001		ANGLES ± .5°	
SIZE B	DWG CODE 07M126	DWG. NO. 647.7900	REV. N/C
SCALE NONE		SHEET 9 OF 9	

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

SHEET METAL



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36011**

Purchase Order Date 4/19/2017
PO Print Date 4/25/2017

Page Number 4 of 5

Order From :

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone

613-446-4544

Ship To Contact
Ship To Phone
Ship Via:
Ship Acct:

VENDOR'S TRUCK

Buyer
Customer POID
Customer Tax #
Terms
Currency
FOB

Chantal Lavoie
10127-2607
Net 30
CAD
FCA - (Free Carrier)

Line Total:

\$7.5

10 158807

D5354-042 R66 CLAMP
REV. C

5/5/2017

3.00

\$2.50

\$7.5

Yes

5/5/2017

BLACK ANODIZE AS PER MIL-A-8625F TYPE 1 OR IB/IC/II/IIB CLASS 2

Line Total:

\$7.5

11 158809

D5355-041 AFT CLAMP
REV. C

5/5/2017

6.00

\$3.25

\$19.

Yes

5/5/2017

BLACK ANODIZE AS PER MIL-A-8625F TYPE 1 OR IB/IC/II/IIB CLASS 2

Line Total:

\$19

12 158757

647.7910 ANGLE
BRACKET REV. N/C

5/5/2017

8.00

\$3.60

\$28

Yes

5/5/2017

BLACK ANODIZE AS PER MIL STD-A-8625 TYPE III, CLASS 2

Line Total:

\$19

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

4/25/2017

DAS
38
9-86

DAS
38
9-86

8017511



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913270

Date: 05-May-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9377 Fax: 613 632-1000		OUR TRUCK	
Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
3 ea	Part: D5354-042 R66 Clamp Black Anodize per MIL-A-8625F, Type II, Class 2 Job: 20964	Rev: C PO: PO36011	Line: 10
6 ea	Part: D5355-041 Aft Clamp Black Anodize per MIL-A-8625F, Type II, Class 2 Job: 20965	Rev: C PO: PO36011	Line: 11
8 ea	Part: 647.7910 Angle bracket Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Job: 20966	Rev: N/C PO: PO36011	Line: 12
1 ea	Part: ADMINISTRATION FEE Administrative Fee Job: 20967	Rev: N/A PO: PO36011	Line: 13
6 ea	Part: 647.3912 Breakaway Tip Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20956	Rev: C PO: PO36011	Line: 2
6 ea	Part: 647.3912 Breakaway Tip Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20957	Rev: C PO: PO36011	Line: 3
6	Part: 647.3914	Rev: C	
Made in Canada.			

DAS
38
1-89

DA
38
9-81

Split 511



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913270

Date: 05-May-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via
		OUR TRUCK
Quantity	Description	
	Date: <u>05/05/2017</u> Certified Signature: <u>[Signature]</u> Receiver Signature: <u>[Signature]</u> A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.	
Made in Canada.		